

We claim:

1. An energy transducer device for positioning at the ocean floor for converting wave action at an ocean surface above the transducer to electrical current, the device comprising:

5           a mounting base configured for positioning at the ocean floor below a location of possible wave action wherein overhead wave displacement generates reciprocating lateral water displacement along a flow path in a substantial horizontal orientation near the ocean floor; and

10           an electro-mechanical transducer coupled to the mounting base and configured for positioning within the flow path and responsive to the reciprocating water movement along the flow path to generate electrical current.

15           2. A device as defined in claim 1, wherein the electro-mechanical device includes rotating impellers operable in response to the water displacement.

            3. A device as defined in claim 2 wherein the impellers are positioned within a tube enclosure oriented along the flow path.

20           4. A device as defined in claim 1 wherein the electro-mechanical device comprises at least one plate displaceable along the flow path in a reciprocating manner, said plate being coupled to the electro-mechanical transducer for converting displacement of the plate to electric current.

25           5. A device as defined in claim 4, wherein the plate is displaceable in a linear manner along the flow path.

            6. A device as defined in claim 5, wherein the device further includes a track and a tracking member coupled between the track and plate to enable linear displacement of the plate.

30           7. A device as defined in claim 4, wherein the plate is displaceable within the flow path in a rotary manner about a rotational axis.

8. A device as defined in claim 8, further comprising a vertical support stem coupled to the plate, wherein the rotational axis is vertically oriented with respect to the ocean floor about the vertical support stem.

5 9. A device as defined in claim 8, wherein the rotational axis is horizontally oriented about a horizontal axis with respect to the ocean floor.

10 10. A device as defined in claim 1, wherein the electro-mechanical device comprises an omnidirectional intrinsical device.

11. A device as in claim 1, wherein the electro-mechanical transducer is positioned within a tube enclosure.

15 12. A device as in claim 11, wherein water movement is driven by pressure differentials experienced at opposing ends of the tube.

20 13. A device as in claim 11, further including displaceable covers positioned over opposing ends of the tube to provide a closed environment for the tube while allowing reciprocating movement of contained fluid for driving the transducer.

14. An energy transducer device for positioning at the ocean floor for converting water movement along a shoreline in the ocean to electrical current, the device comprising:

25 a mounting base configured for positioning at the ocean floor at a location of possible water movement along a flow path in a substantial horizontal orientation near the ocean floor; and

30 an electro-mechanical transducer coupled to the mounting base and configured for positioning within the flow path and responsive to the water movement along the flow path to generate electrical current.

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15. A device as defined in claim 14, wherein the electro-mechanical transducer includes an anemometer configuration of rotational elements for providing rotational energy in response to the water movement.

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16. A device as defined in claim 14, wherein the electro-mechanical transducer includes a drag body attached to a rotatable platform for providing rotational energy to the platform in response to the water movement.

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17. An energy transducer device for positioning at the ocean floor for converting wave action at an ocean surface above the transducer to electrical current, the device comprising:

a mounting base configured for positioning at the ocean floor below a location of possible wave action wherein overhead wave displacement generates reciprocating water displacement along a flow path near the ocean floor; and

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an electro-mechanical transducer coupled to the mounting base and configured for positioning within the flow path and responsive to the reciprocating water movement along the flow path to generate electrical current.

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